

Appl. No. 10/708,152
Amdt. dated May 17, 2005
Reply to Office action of April 12, 2005

REMARKS/ARGUMENTS

1. Objection to the title:

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

5 The following title is suggested: A METHOD FOR FABRICATING A FLUID INJECTION HEAD STRUCTURE.

Response:

10 The applicant has amended the title according to the Examiner's suggestion.
Acceptance of the amended title is requested.

2. Rejection of claims 1-6 and 8 under 35 U.S.C. 102(b):

15 Claims 1-6 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Cornell et al (US 5,774,148) for reasons of record.

Response:

20 Claim 1 has been amended to correct a grammar error. The applicant would like to point out the patentable differences between the limitations contained in claim 1 of the instant application and the Cornell et al (hereinafter Cornell) reference.

25 First of all, Cornell does not teach that the first conductive trace is composed of a poly-silicon layer, as is recited in claim 1. Instead, Cornell teaches in col.5, line 14 that the first conductive trace 46 is an aluminum-copper alloy. In the above-identified office action, the Examiner states that Cornell teaches forming a first conductive trace (46), which is composed of the poly-silicon layer (38). However, from analyzing Cornell's Fig.5, and the corresponding portions of the specification, the conductive layer 46 and the poly-silicon 38 are two separate layers. Therefore, it cannot be said that the conductive layer 46 is composed of the

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poly-silicon 38.

Secondly, the Examiner states that Cornell teaches a second conductive trace 52 which is used to electrically couple the functional device 25 with the bubble generator 39, and to couple the functional device 25 with the first conductive trace 46. However, the second conductive trace 52 shown in Cornell's Fig.5 does neither of these things. The second conductive trace 52 contacts the first conductive trace 46 through the via 52a, but does not couple the functional device 25 with the bubble generator 39 or couple the functional device 25 with the first conductive trace 46.

For the above reasons, the applicant submits that claim 1 is patentably distinct from Cornell, and is not anticipated by Cornell. Claims 2-6 and 8 are dependent on claim 1, and should be allowed if claim 1 is allowed. Reconsideration of claims 1-6 and 8 is respectfully requested.

3. Rejection of claim 7 under 35 U.S.C. 103(a):

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornell et al in view of Shirai (US 5,422,505) for reasons of record.

20 **Response:**

The Examiner stated that Shirai teaches that a gate and the first conductive trace are formed in a same photo-etching process, as recited in claim 1. However, upon inspecting figures 2I and 2J and col.3, lines 50-56, Shirai only teaches that a gate is made out of poly-silicon. Shirai does not teach that a first conductive trace and a gate are formed in the same photo-etching process. In fact, Shirai does not even teach a separate first conductive trace formed out of poly-silicon. Therefore, claim 7 is patentably distinct from the combination of Cornell and Shirai. Moreover, claim 7 is dependent on claim 1, and should be allowed if claim 1 is allowed. Reconsideration

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of claim 7 is respectfully requested.

4. Rejection of claims 9-12 under 35 U.S.C. 103(a):

Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over
5 Cornell et al in view of Chen et al (US 6,471,338) for reasons of record.

Response:

Upon inspecting the Chen et al patent (US 6,471,338), the Applicant noticed
that the instant application and the Chen et al patent have the same inventive entity.
10 The instant application relies on domestic priority under 35 U.S.C. 120 of its parent
application, serial number 10/065,609, which was filed on November 3, 2002. Since
the Chen et al patent was not patented or published more than a year before the
earliest effective US filing date of the instant application, the Chen et al patent does
not qualify as prior art with respect to the instant application. Therefore,
15 reconsideration of claims 9-12 is requested.

5. Rejection of claim 13 under 35 U.S.C. 103(a):

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornell
et al in view of Chen et al and further in view of Hess et al (US 5,122,812) for reasons
20 of record.

Response:

Claim 13 is dependent on claim 1, and should be allowed if claim 1 is allowed.
Reconsideration of claim 13 is respectfully requested.
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6. Introduction to new claims 14-15:

New claim 14 contains a limitation stating, "at least one layer of the functional
device is formed on the same poly-silicon layer as the first conductive trace".

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This amendment is supported in paragraph [0036] of the specification. The specification teaches that, "The poly-silicon lines 23 and the gate 64 can be formed in a photo-etching process (PEP) to simplify the manufacturing process." In addition, paragraph [0023] of the specification states that, "Not counting the resistance layers, only one single poly-silicon layer and one single metal layer (SPSM) process is performed in the present invention." These two statements teach that the gate 64 of the MOSFET 15 and the poly-silicon lines 23 (first conductive layer) are formed on the same poly-silicon layer.

None of the cited prior art teach or suggest forming at least one layer of the functional device on the same poly-silicon layer as the first conductive trace.

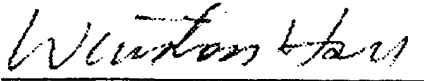
New claim 15 contains a further limitation to more clearly define the claimed invention. Claim 15 states that the gate of the MOSFET is formed on the same poly-silicon layer as the first conductive trace. This amendment is also supported in paragraph [0036] of the specification.

No new matter is added through either of the new claims 14-15. Acceptance of claims 14-15 is respectfully requested.

Since all claims of the instant application are patentable over the prior art, the applicant respectfully requests that a timely Notice of Allowance be issued in this case.

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Respectfully submitted,



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- 10 Note: Please leave a message in my voice mail if you need to talk to me. The time in D.C. is 12 hours behind the Taiwan time, i.e. 9 AM in D.C. = 9 PM in Taiwan).